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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/700,065

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Donald J. Fasen

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EXAMINER

GOMA, TAWFIK A

ART UNIT

PAPER NUMBER

2627

NOTIFICATION DATE

DELIVERY MODE

07/29/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/700,065	Applicant(s) FASEN, DONALD J.	
	Examiner TAWFIK GOMA	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6-10,12-14,16-23 and 38-55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9,10,12-14,38,39,44-47,54 and 55 is/are allowed.
- 6) ☒ Claim(s) 6-8,16-23,48 and 49 is/are rejected.
- 7) ☒ Claim(s) 40-43 and 50-53 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 40-43 are objected to because of the following informalities: Claim 40 is not grammatically accurate in the limitation, "wherein in each preamble area provides interleaved..."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16-21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 recites the limitation "the timing information" in lines 10-11. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall (US 2002/0122373) in view of Mizasawa et al (US 5270990)

Regarding claim 1, Marshall discloses a semiconductor memory comprising: a controller (fig. 2); a media including information tracks (fig. 7) and read/write mechanisms adjacent to

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information tracks (fig. 15), configured to read the information (par. 31). Marshall further discloses wherein the controller controls the movement of the medium using flexures to create any desired read/write path based on a control signal (par. 66). Marshall fails to disclose wherein the media includes an area having a first group of parallel servo tracks and a group of data tracks parallel to and separated apart from the servo tracks; and for each area a first read/write mechanism for the servo tracks to read first information and a second read/write mechanism adjacent to the data track and for each area the controller is configured to receive a first signal generated in response to the first information being read, and wherein the controller is configured to generate a second signal configured to cause a position of the media to be adjusted relative to the electron field emitter in response to the first signal. In the same field of endeavor, Mizasawa discloses using a servo track (PL, PR and CD, fig. 5) parallel to a data track (Pit rows, fig. 5), a read/write mechanism for each (TEB, MEB, fig. 5) including an electron field emitter (col. 10 lines 46-59), and a controller configured to receive the first signal from the servo track and generate a second signal to cause a position of the media to be adjusted relative to the first read/write electron emitter (col. 20 lines 38-56). It would have been obvious to one of ordinary skill in the art to modify the storage device disclosed by Marshall in order to provide information on the medium for generating a positioning signal as taught by Mizasawa. The rationale is as follows: One of ordinary skill in the art would have been motivated to generate positioning adjustment signal from information on a semiconductor memory in order to adjust the 'tracking error' of the read/write means with respect to the data bits on the memory.

Regarding claim 2, Mizasawa further discloses wherein the first information comprises position information (CEB, fig. 5 and col. 11 lines 4-22).

Regarding claim 48, Mizasawa wherein the servo tracks are in equal length with aligned first and second ends (PL, PR, fig. 5).

Claims 6-8 and 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall (US 2002/0122373) in view of Mizasawa et al (US 5270990) and further in view of Guzik et al (US 2002/0114101)

Regarding claim 6, Marshall discloses wherein the controller is configured to generate a third signal configured to cause a timing window to be generated wherein a timing signal is generated in response to the first signal (par. 66). Marshall fails to disclose wherein timing information is generated from the first information. In the same field of endeavor, Guzik discloses providing timing information in servo burst information (par. 60). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide timing information in the servo information. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to provide timing information in order to read/write information at a proper bit density and phase such that jitter error is minimized.

Regarding claim 7, Marshall further discloses a read/write mechanism configured to read second information from the media during the timing window (par. 66).

Regarding claim 8, Marshall further discloses a read/write mechanism configured to write second information to the media during the timing window (par. 66).

Regarding claims 16, Marshall discloses a storage device comprising: a media that includes a first cluster and, separate therefrom a second cluster (par.43), the first cluster including first information (par. 39); first means for generating timing information (110D, fig. 2 and par. 66); and second means for writing second information in the second cluster using the timing information (pars. 37 and 66). Marshall discloses that the controller 110D generates timing windows for writing to the different clusters or arrays on the medium. Marshall fails to disclose wherein two areas are provided whose amplitudes are compared by a controller and the information is used to write information to the second cluster. In the same field of endeavor, Mizasawa discloses using a servo track (PL, PR and CD, fig. 5) parallel to a data track (Pit rows, fig. 5), a read/write mechanism for each (TEB, CEB, MEB, fig. 5) including an electron field emitter (col. 10 lines 46-59), and a controller configured to receive the first signal from the servo track and generate a second signal to cause a position of the media to be adjusted relative to the first read/write electron emitter (col. 20 lines 38-56). It would have been obvious to one of ordinary skill in the art to modify the storage device disclosed by Marshall in order to provide information on the medium for generating a positioning signal as taught by Mizasawa. The rationale is as follows: One of ordinary skill in the art would have been motivated to generate positioning adjustment signal from information on a semiconductor memory in order to adjust the 'tracking error' of the read/write means with respect to the data bits on the memory.

Further regarding claim 16, Marshall in view of Mizasawa fail to disclose wherein timing windows are generated from the first information read from the medium. In the same field of endeavor, Guzik discloses a servo burst information system, where the servo information

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contains timing information (par. 60) and the system includes a controller with means for comparing the amplitudes of signals detected from information stored in a first region on said media to signals detected from information stored in a second region on said media to generate said second signal (par. 64). It would have been obvious to one of ordinary skill in the art to modify the storage device disclosed by Marshall in view of Mizasawa in order to provide timing information on the medium as taught by Guzik. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to provide timing information on the medium in order to read/write information at a proper bit density and phase such that jitter error is minimized.

Regarding claim 17, Marshall further discloses third means for reading third information from the second cluster using the timing information (par. 37). Marshall discloses a plurality of arrays or clusters and a plurality of means for reading and writing to the arrays using the timing information generated by the controller 110D.

Regarding claim 18, Marshall further discloses third means for generating position information (110D, fig. 2 and par. 44); and fourth means for adjusting the media relative to the second means in response to the position information (110C, fig. 2 and par. 44). Marshall fails to disclose wherein the position information is generated from the first information. Mizasawa discloses generating the position information from the first information (TEB, CEB, fig. 5) and the combination follows as in claim 16 above.

Regarding claim 19, Marshall further discloses wherein the second cluster includes a plurality of patches, wherein each of the plurality of patches includes a plurality of tracks, and

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wherein the second means is for writing the second information to one of the plurality of tracks (135A, 135B, fig. 2 and par. 66).

Regarding claim 20, Marshall further discloses wherein the position information indicates a position of the second means relative to the one of the plurality of tracks (par. 44).

Regarding claim 21, Marshall further discloses wherein the fourth means is for adjusting the media relative to the second means in response to the position information to align the second means with a center of the one of the plurality of tracks (par. 44 and fig. 14). Mizasawa further discloses that a tracking error signal is generated from the first information for positioning the head at the center of the track (col. 20 lines 38-56).

Regarding claim 22, claim 22 recites similar features to claim 16 above and is rejected for the same reasons as applied to claim 16 above. Further regarding claim 22, Mizasawa further discloses a field emitter to read the servo information (TEB, fig. 5). The rationale for the combination follows as in claim 16 above.

Regarding claim 23, Marshall discloses a second field emitter configured to read second information from the medium (par. 44) and wherein the controller is configured to adjust the position of the medium relative to the second field emitter in response to the second signal (par. 44 and fig. 2). Mizasawa discloses wherein the information is servo information as applied above.

Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall (US 2002/0122373) in view of Mizasawa et al (US 5270990) and further in view of Shu (US 6765748).

Regarding claim 49, Marshall in view of Mizasawa fail to disclose wherein the servo track is subdivided into first and second preamble areas adjacent to each end respectively and a track region there between. In the same field of endeavor, Shu discloses preamble regions and a track region for a servo track (200, 250, fig. 2a). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide preamble regions. The rationale is as follows: One of ordinary skill in the art at the time of the applicant's invention would have been motivated to provide preamble regions to the servo tracks as it would have been the application of a known technique to a known device ready for improvement which would yield predictable results.

Allowable Subject Matter

Claims 9-10, 12-14, 38-47, 54 and 55 are allowed. Note that claims 40-43 are objected to above for the minor grammatical informality.

Claim 50-53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAWFIK GOMA whose telephone number is (571)272-4206. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph H. Feild/
Supervisory Patent Examiner, Art Unit
2627

/Tawfik Goma/
Examiner, Art Unit 2627